

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012033**Date Inspected:** 16-Feb-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Mike Johnson, Steve McConnell			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	SAS OBG 2E/3E steel backing		

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the steel backing bar to be used at 2E/3E-A. The following observations were made.

- 1.) 2E/3E-A Steel backing bar splicing
- 2.) Ultrasonic Testing (UT) Verification

2E/3E Steel Backing

The QA Inspector noted the ABF welders Mitch Sittinger and Jordan Hazelaar were setting up to perform the complete joint penetration (CJP) weld splices of the steel backing. The QA Inspector randomly observed the ABF welding representatives identified above had cut and ground bevels in 5 total sections of the 1-1/2" steel backing. The QA Inspector noted the steel backing was being fit up in accordance with pre qualified weld joint designated Bu-2. The QA Inspector verified a 60° included angle single vee groove for a total of 4 CJP weld splices in the steel backing. The QA Inspector randomly observed and noted the Smith Emery Quality Control (QC) representatives Steve McConnell and Mike Johnson were on site performing visual testing (VT) of the fit up of steel backing prior to welding.

After the fit up of the steel backing was accepted by the QC Inspectors, the QA Inspector randomly observed the ABF welder Jordan Hazelaar and Mitch Sittinger performing shielded metal arc welding (SMAW) root, fill and cover passes in all 4 of the fit up grooves after preheating to 100°F with a rosebud torch. The QA Inspector randomly observed the SE QC Inspector Mike Johnson performing preheat verifications utilizing a digital heat gun.

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The QA Inspector randomly observed the ABF welders to be utilizing a new box of Lincoln E7018 H4R low hydrogen electrodes. The QA Inspector randomly observed the SE QC Inspector Mike Johnson set the SMAW machine to 130Amps, which appeared to be in general compliance with ABF-WPS-D1.5-1031 Rev.0. The QA Inspector randomly observed the ABF welders install weld tabs to either side of the joints to perform the CJP groove welds. The QA Inspector randomly observed the ABF welders complete 4 of the 4 steel backing bar splices from the front side of the joint. The QA Inspector randomly observed the ABF welders back gouge the 4 splices with a grinding disc. After the CJP groove welds had been back gouged to bright metal (pictured below), the SE QC Inspector Steve McConnell performed magnetic particle testing (MT)(pictured below). The QA Inspector randomly observed no relevant indications were located at the time of the testing. The QA Inspector randomly observed all of the welds through completion. The QA Inspector noted after the welds were completed, the weld reinforcement was ground flush with the base material. The QA Inspector observed the QC Inspectors accept the welds visually and indicate with a distinguishing marking.

Steel Backing Bar UT

The QA Inspector randomly observed the SE QC Inspector Steve McConnell perform UT of all 4 of the CJP groove weld backing bar splices. After the UT was completed the QC Inspector informed the QA Inspector no rejectable indications were located at the time of the testing. The QA Inspector performed UT verification of approximately 100% of the total welds accepted by the Mr. McConnell. It was noted the QA Inspector did not locate any relevant indications at the time of the testing. It was noted by the steel backing identified above is to be stored and used later at the CJP weld identified as 2E/3E-A.



Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

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Inspected By: Bettencourt,Rick

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer